

WHAT IS CLAIMED IS:

1. An ink for ink jet recording, which comprises a dye having:

a λ_{max} in an aqueous solution of from 390 nm to 470 nm; and

a $I(\lambda_{\text{max}} + 70 \text{ nm}) / I(\lambda_{\text{max}})$ ratio of not more than 0.4, in which $I(\lambda_{\text{max}})$ is the absorbance at λ_{max} and $I(\lambda_{\text{max}} + 70 \text{ nm})$ is the absorbance at $(\lambda_{\text{max}} + 70 \text{ nm})$, the dye being dissolved and/or dispersed in an aqueous medium,

wherein the ink has a forced fading rate constant of not greater than $5.0 \times 10^{-2} \text{ [hour}^{-1}\text{]}$, in which the forced fading rate constant is decided by printing the ink on a reflection type medium, thereafter measuring a reflection density through a Status A filter, specifying one point having a reflection density (D_B) in an yellow region of 0.90 to 1.10 as an initial density of the ink, forcedly fading the printed matter by use of an ozone fading tester that can regularly generate 5 ppm of ozone, and determining the time taken until the reflection density reaches 80% of the initial density, and

the total amount of a cation in said ink except for a monovalent metal ion, a hydrogen ion, an ammonium ion, an organic quaternary nitrogen ion and an ion produced by the proton addition to a nitrogen atom in a basic organic material is 0.5 wt% or less.

2. The ink for ink jet recording according to claim 1, wherein the λ_{max} in an aqueous solution of the dye is 390 nm to 470 nm, and the $I(\lambda_{\text{max}} + 70 \text{ nm}) / I(\lambda_{\text{max}})$ ratio is not more than 0.2.

3. The ink for ink jet recording according to claim 1, wherein the oxidation potential of the dye is more noble than 1.0 V (vs SCE).

4. An ink for ink jet recording, which comprises a dye represented by the following formula (1), in which the dye has a λ_{max} in an aqueous solution of 390 nm to 470 nm, and is dissolved and/or dispersed in an aqueous medium,

wherein the total amount of a cation in said ink except for a monovalent metal ion, a hydrogen ion, an ammonium ion, an organic quaternary nitrogen ion and an ion produced by the proton addition to a nitrogen atom in a basic organic material is 0.5 wt% or less:



wherein A and B each independently represents a heterocyclic group which may be substituted.

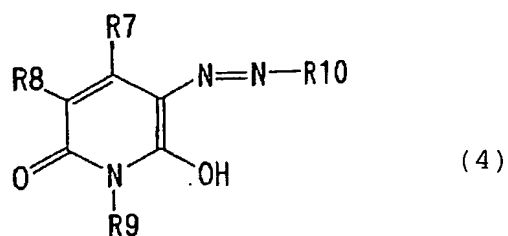
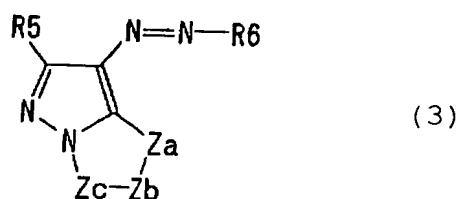
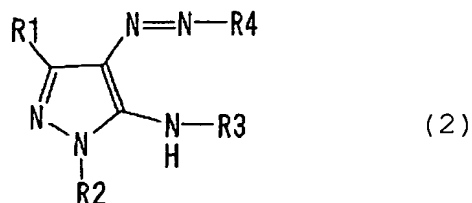
5. The ink for ink jet recording according to claim 1, which comprises a lithium ion.

6. The ink for ink jet recording according to claim 4, which comprises a lithium ion.

7. The ink for ink jet recording according to claim 1, wherein the cation in said ink except for a monovalent metal ion, a hydrogen ion, an ammonium ion, an organic quaternary nitrogen ion and an ion produced by the proton addition to a nitrogen atom in a basic organic material is at least one selected from the group consisting of magnesium ion, zinc ion, calcium ion, strontium ion, aluminum ion and a transition metal ion.

8. The ink for ink jet recording according to claim 4, wherein the cation in said ink except for a monovalent metal ion, a hydrogen ion, an ammonium ion, an organic quaternary nitrogen ion and an ion produced by the proton addition to a nitrogen atom in a basic organic material is at least one selected from the group consisting of magnesium ion, zinc ion, calcium ion, strontium ion, aluminum ion and a transition metal ion.

9. The ink for ink jet recording according to claim 4, wherein the dye represented by the formula (1) is at least one of dyes represented by the following formulae (2), (3) and (4):



wherein R1 and R3 each represents a hydrogen atom, a cyano group, an alkyl group, a cycloalkyl group, an aralkyl group, an alkoxy group, an alkyl thio group, an aryl thio group, an aryl group, or an ionic hydrophilic group; R2 represents a hydrogen atom, an alkyl group, a cycloalkyl group, an aralkyl group, a carbamoyl group, an acyl group, an aryl group or a heterocyclic group; R4 represents a heterocyclic group; R5 represents a hydrogen atom, a cyano group, an alkyl group, a cycloalkyl group, an aralkyl group, an alkoxy group, an alkyl thio group, an aryl thio group, an aryl group or an ionic

hydrophilic group; Z_a represents -N=, -NH- or -C(R₁₁)=; Z_b and Z_c each independently represents -N= or -C(R₁₁)=; R₁₁ represents a hydrogen atom or a non-metal substituent; R₆ represents a heterocyclic group,

R₇ and R₉ each independently represents a hydrogen atom, a cyano group, an alkyl group, a cycloalkyl group, an aralkyl group, an aryl group, an alkyl thio group, an aryl thio group, an alkoxy carbonyl group, a carbamoyl group, or an ionic hydrophilic group; R₈ represents a hydrogen atom, a halogen atom, an alkyl group, an alkoxy group, an aryl group, an aryloxy group, a cyano group, an acylamino group, a sulfonylamino group, an alkoxy carbonylamino group, an ureido group, an alkyl thio group, an aryl thio group, an alkoxy carbonyl group, a carbamoyl group, a sulfamoyl group, an alkyl sulfonyl group, an aryl sulfonyl group, an acyl group, an amino group, a hydroxy group or an ionic hydrophilic group; R₁₀ represents a heterocyclic group.

10. An ink set comprising the ink for ink jet recording according to claim 1.

11. An ink set comprising the ink for ink jet recording according to claim 4.